

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Lockheed Martin Corporation	)	IBFS File Nos. SES-LIC-20081103-01443;
	)	SES-AMD-20081130-01518; SES-AMD-
	)	20081219-01664
	)	
Application for License for an earth station at	)	Call Sign: E7541
Carpentersville, NJ	)	

**ORDER AND AUTHORIZATION**

**Adopted: October 7, 2014**

**Released: October 7, 2014**

By the Chiefs, Satellite Division, International Bureau and Policy and Rules Division, Office of Engineering and Technology:

**I. INTRODUCTION**

1. In this Order, we grant Lockheed Martin Corporation's (Lockheed Martin) application for a license to operate two 14.2 meter antennas for the provision of Fixed Satellite Service (FSS) in the 3650-4200 MHz (space-to-Earth) frequency band, on the 6423.5 MHz (Earth-to-space) center frequency, and in the 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) frequency bands. We also waive Section 2.106, footnote NG169, of the Commission's rules, which limits co-primary status for FSS earth stations in the extended C-band frequencies of 3650-3700 MHz to certain "grandfathered" stations, based on the unique circumstances of this case, as discussed more fully below.<sup>1</sup> We also waive the coordination requirement of Section 25.203(c) of the Commission's Rules to the extent detailed below,<sup>2</sup> and Section 2.106, footnote NG185, which limits operations in the 3650-3700 MHz band to inter-continental international services.<sup>3</sup>

**II. BACKGROUND**

2. *The 3650-3700 MHz band.* Prior to 2000, the 3650-3700 MHz band was allocated for Federal Government radiolocation services and non-Government international, intercontinental FSS systems (space-to-Earth) on a co-primary basis. In October 2000, the Commission added an allocation in the 3650-3700 MHz band to non-Federal Government fixed and mobile terrestrial services (FS and MS respectively) on a co-primary basis.<sup>4</sup> At the same time, the Commission changed the FSS allocation in the 3650-3700 MHz band to secondary status, but grandfathered existing FSS earth stations on a primary basis, and established that any additional applications for primary FSS earth stations had to be located within 10

<sup>1</sup> 47 C.F.R. § 2.106, footnote NG169.

<sup>2</sup> 47 C.F.R. § 25.203(c).

<sup>3</sup> 47 C.F.R. § 2.106, footnote NG185.

<sup>4</sup> *Amendment of the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band; 4.9 GHz Band Transferred from Federal Government Use*, First Report and Order and Second Notice of Proposed Rule Making, 15 FCC Rcd 20488 (2000) (*3650-3700 MHz Allocation Order*), *recon. granted in part, denied in part* by Memorandum Opinion and Order, 20 FCC Rcd 6502 (2005) (*3650-3700 MHz Allocation Reconsideration*), *amended* by Memorandum Opinion and Order, 22 FCC Rcd 10421 (2007).

miles of existing grandfathered sites and had to be submitted prior to December 1, 2000.<sup>5</sup> Additional FSS earth station operations could be authorized after December 1, 2000 – but only on a secondary basis.<sup>6</sup> In order to protect against harmful interference from FS and MS operations, a 150-kilometer circular “protection zone” was established around each grandfathered FSS earth station. Terrestrial FS and MS stations can operate within that zone if operations are coordinated with the FSS earth station licensee.<sup>7</sup> The Commission limited primary status of FSS operations in the 3650-3700 MHz band to grandfathered earth stations because it was concerned that additional FSS earth station deployments would increase the number of protection zones, which would consequently increase the difficulty and costs of coordination for terrestrial FS and MS operations and could hinder the opportunities for terrestrial operations in the band.<sup>8</sup>

3. *The Lockheed Martin Stations.* Lockheed Martin operated two earth stations at Carpentersville, NJ that pre-date the *3650-3700 MHz Allocation Order*.<sup>9</sup> At the time of the *3650-3700 MHz Allocation Order*, neither of the stations was authorized for operations in the 3650-3700 MHz band. However, on March 6, 2002, the International Bureau, with the concurrence of the Office of Engineering and Technology, granted authority for such operations, and waived the grandfathering provision in footnote NG169 of the Table of Frequency Allocations to confer grandfathered status for Call Sign E7541.<sup>10</sup> Lockheed Martin’s license for both stations expired on August 3, 2007.<sup>11</sup> Lockheed Martin did not file timely renewal applications for either earth station. This resulted in enforcement action for unauthorized operations.<sup>12</sup> On May 16, 2008, Lockheed Martin filed a petition for reinstatement of the expired licenses, and it supplemented that request on June 18, 2008.

4. On November 3, 2008, Lockheed Martin filed the instant application for a new license for the earth stations. Lockheed Martin amended the application on November 30 and December 19, 2008. The application, as amended, was accepted for filing and placed on public notice on February 11, 2009.<sup>13</sup>

### III. DISCUSSION

5. Lockheed Martin requests waivers of several Commission rules in this application. First, Lockheed Martin seeks a waiver of Section 2.106, footnote NG169 with respect to the operation in the 3650-3700 MHz downlink band. Second, Lockheed Martin requests a waiver of the coordination requirement of Section 25.203(c) with respect to the C-band uplink and downlink frequencies that are shared on an equal basis with terrestrial services. Finally, Lockheed Martin requests a waiver of Section 2.106, footnote NG185, which limits operations in the 3650-3700 MHz band to inter-continental international services.

6. The Commission may waive a rule for good cause shown.<sup>14</sup> Waiver is appropriate if special circumstances warrant a deviation from the general rule, and such deviation would better serve the public

<sup>5</sup> *3650-3700 MHz Allocation Reconsideration*, 20 FCC Rcd at 6505, para. 7.

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*, 20 FCC Rcd at 6524, para. 60.

<sup>8</sup> *Id.*, 20 FCC Rcd at 6508-09, para. 18.

<sup>9</sup> In 1987, two Lockheed Martin antennas at Carpentersville were granted authorization under a single license, E7541. *See* File No. 1742 DSE-P/L-84.

<sup>10</sup> *See* IBFS File No. SES-MOD-20001130-02268.

<sup>11</sup> *See* IBFS File Nos. SES-RWL-19970808-01082 and SES-RWL-19970808-01083.

<sup>12</sup> *Notice of Liability for Forfeiture*, 24 FCC Rcd 2960 (Spec. Enf. Div., Enf. Bur., 2009). This matter has since been resolved.

<sup>13</sup> *See Satellite Communications Services, Re: Satellite Radio Applications Accepted for Filing*, Public Notice, Report No. SES-011111 (Feb. 11, 2009).

<sup>14</sup> 47 C.F.R. § 1.3.

interest than would strict adherence to the general rule.<sup>15</sup> Generally, the Commission may grant a waiver of its rules in a particular case if the relief requested would: (1) not undermine the policy objective of the rule in question; and (2) otherwise serve the public interest.<sup>16</sup> We discuss the individual waiver requests below.

7. *“Grandfathered” Status.* The Carpentersville facility is used to provide TT&C services to newly-launched spacecraft that are being maneuvered to assigned orbital locations or undergoing in-orbit testing prior to commencement of operations. The core facts that enabled the Commission to act favorably in 2002 on Lockheed Martin’s request to grandfather the Carpentersville earth station have not materially changed, and therefore a waiver is appropriate.

8. Specifically, the geographic area in which FS stations will be required to coordinate with FSS earth stations will not be increased by the requested waiver. In its 2001 submission, Lockheed Martin provided a figure that showed the coordination zones of seven other grandfathered FSS earth stations in the 3650-3700 MHz band, overlaid on the coordination zone of the Carpentersville site.<sup>17</sup> The Carpentersville zone was entirely subsumed within the combined coordination zones of the other seven licensed stations, and thus grant of primary status to Carpentersville did not create any additional geographic areas to which coordination obligations applied. Three of those seven earth stations remain operational.<sup>18</sup> The Carpentersville earth station’s coordination zone continues to be subsumed within the coordination zones of the remaining three stations, except for a small area that is approximately 10% of the total coordination zone.

9. Furthermore, the site-specific factors that originally supported grandfathering the Carpentersville earth station continue to apply today. The earth station antennas are located in a rural area and are in a working stone quarry, shielded by terrain from terrestrial interference. These factors substantially facilitate future coordination with co-primary stations, as confirmed by the fact that since August 2007, when the authorization for Lockheed’s Carpentersville C-band earth station facility expired, approximately 300 terrestrial sites have been registered within 150 km of Lockheed’s earth station, and all certified that they had obtained an agreement with existing grandfathered earth stations.<sup>19</sup> Accordingly, we find that grant of the requested waiver will not undermine the objectives of footnote NG169.<sup>20</sup> However, this waiver is without prejudice to any future Commission action under GN Docket 12-354.<sup>21</sup>

10. *Waiver of Coordination Requirements.* We agree with Lockheed Martin that a waiver of the coordination requirement of Section 25.203(c) of the Commission’s Rules. Section 25.203(c) of the Commission’s Rules provides that an earth station applicant, prior to the filing of its application, shall coordinate the proposed frequency usage with existing terrestrial users and with previously-filed applicants

<sup>15</sup> *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990).

<sup>16</sup> *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969); *Dominion Video Satellite, Inc.*, Order and Authorization, 14 FCC Rcd 8182 (Int’l Bur. 1999).

<sup>17</sup> See Letter from Stephen D. Baruch, Esq., Counsel for Lockheed Martin Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission (November 16, 2001) (In IBFS File No. SES-MOD-20001130-02268 --Further Supplemental Information Regarding Application of Lockheed Martin Corporation to Modify Earth Station at Carpentersville, NJ), at Attachment 2.

<sup>18</sup> Call signs E950436, KA444, and E6777.

<sup>19</sup> FCC Form 601 requires that applicants for 3650-3700 MHz terrestrial stations within 150 km of grandfathered earth stations certify that they have obtained agreements with the licensees of the grandfathered earth stations. Although not required by the rules, some applicants specifically provided a copy of their agreement with Lockheed.

<sup>20</sup> 47 C.F.R. § 2.106, footnote NG169.

<sup>21</sup> *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Further Notice of Proposed Rulemaking, GN Docket No. 12-354, 29 FCC Rcd 4273 (rel. Apr. 23, 2014).

for terrestrial station authorizations. In this case, frequency coordinators and station operators have continued to coordinate and protect the relevant frequency assignments from August 7, 2007 to the present. Under these unique circumstances waiver of the frequency coordination requirements of Section 25.203(c) of the Commission's rules is warranted in order to avoid duplicative coordination efforts. As noted by Lockheed Martin, the proposed C-band FSS transmit and receive facilities at Carpentersville, NJ have been continuously protected pursuant to the terms of the existing frequency coordination arrangements, despite the expiration of the license.<sup>22</sup> Grant of the Lockheed Martin request for waiver of the requirement of Section 25.203(c) in this unusual instance will not undermine the purpose of the rule in any way; coordination has in fact been performed as needed, and all applicable prior agreements will continue to be respected. Our grant of authority is limited, however to the azimuth, elevation, and power for C band frequencies specified in prior licenses. Any changes to these parameters will require submission of a new coordination report.

11. *Waiver of Section 2.106, footnote NG185.* We agree with Lockheed Martin that a waiver of Section 2.106, footnote NG185, that limits FSS to international systems only,<sup>23</sup> is appropriate under the circumstances presented here. Limited technical operations consisting of TT&C services only, on an intermittent-use basis, although not strictly speaking qualifying as international inter-continental service as required by Section 2.106, footnote NG185. As such, grant of the waiver of Section 2.106, footnote NG185 would not contravene the purpose of the rule, as the current authorization is limited to a single earth station.

#### IV. CONCLUSION

12. Based upon the foregoing, we conclude that grant of the above-captioned applications, subject to conditions, will serve the public interest, convenience, and necessity.

#### V. ORDERING CLAUSES

13. Accordingly, IT IS ORDERED that, pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, Lockheed Martin's request to operate its Carpentersville, New Jersey, earth station (Call Sign: E7541), IS GRANTED as follows:

Frequency (MHz)	Antenna IDs	Tx/Rx Mode	Points of Communication
6423.5-6423.5	N-ANT 2 & S-ANT 1	TX	ALSAT
3650.0-3700.0	N-ANT 2 & S-ANT 1	RX	INTELSAT 25 (S2804) INTELSAT 805 in AOR INTELSAT 901 (S2405) INTELSAT 903 (S2407) INTELSAT 905 (S2409) INTELSAT 907 (S2411) INTELSAT 10-02 (S2414)
3700.5-4199.5	N-ANT 2 & S-ANT 1	RX	ALSAT
14000.0-14500.0	S-ANT 1	TX	ALSAT
11700.0-12200.0	S-ANT 1	RX	ALSAT

<sup>22</sup> See Lockheed Martin Application at 9.

<sup>23</sup> 47 C.F.R. § 2.106, footnote NG185.

14. IT IS FURTHER ORDERED that, pursuant to Sections 0.31 and 0.241 of the Commission's rules on delegated authority, 47 C.F.R. §§ 0.31 and 0.241, Lockheed Martin's request for waiver of Section 2.106 of the Commission's rules, footnote NG169 to the U.S. Table of Frequency Allocations, to allow Lockheed Martin's Carpentersville, New Jersey, earth stations (Call Sign: E7541) to operate in the 3650-3700 MHz band on a co-primary basis with terrestrial fixed and mobile services IS GRANTED for TT&C services with specifically authorized satellites designated in previous or future grants of authorization under call sign E7541.

15. IT IS FURTHER ORDERED that, pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, Lockheed Martin's request for waiver of the coordination requirements of Section 25.203(c) of the Commission's Rules, IS PARTIALLY GRANTED. Operations in the 3700.5-4199.5 MHz band and at the center frequency of 6423.5 MHz are limited to operations within the ranges of azimuth, elevation, and power density toward the horizon as authorized in IBFS File No. SES-LIC-19840705-01408.

16. IT IS FURTHER ORDERED that, pursuant to Sections 0.31 and 0.241 of the Commission's rules on delegated authority, 47 C.F.R. §§ 0.31 and 0.241, Lockheed Martin's request for waiver of the inter-continental international services limitation in Section 2.106, footnote NG185 of the Commission's Rules, IS GRANTED, limited to TT&C operations in the 3650-3700 MHz band.

17. IT IS FURTHER ORDERED that, Lockheed Martin's petition for reinstatement of expired licenses, filed May 16, 2008, and supplemented on June 18, 2008, IS DISMISSED as moot.

FEDERAL COMMUNICATIONS COMMISSION

Jose P. Albuquerque  
Chief, Satellite Division  
International Bureau

Mark Settle  
Chief, Policy and Rules Division  
Office of Engineering and Technology